

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/02/98

Date Received: 03/24/98

Project: Metro Self-monitor, PO# M10464

Date Samples Extracted: 03/30/98

Date Extracts Analyzed: 03/31/98

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, ZINC
USING METHOD 6010**

**Samples Processed Using Method 3005A
Results Reported as mg/L (ppm)**

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M10464	0.47	0.35	0.39	<0.05
Method Blank	<0.05	<0.05	<0.05	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/02/98

Date Received: 03/24/98

Project: Metro Self-monitor, PO# M10464

**QUALITY ASSURANCE RESULTS
FOR TOTAL METALS BY
INDUCTIVELY COUPLED PLASMA (ICP)
(METHOD 6010)**

Laboratory Code: 803121-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.23	0.37	47a	0-20
Copper	mg/L (ppm)	0.17	0.25	38a	0-20
Nickel	mg/L (ppm)	0.23	0.31	30a	0-20
Zinc	mg/L (ppm)	<0.05	<0.05	nm	0-20

Laboratory Code: 803121-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	RPD
Chromium	mg/L (ppm)	5	0.23	96	100	80-120	4
Copper	mg/L (ppm)	5	0.17	98	104	80-120	6
Nickel	mg/L (ppm)	10	0.23	95	96	80-120	1
Zinc	mg/L (ppm)	5	<0.05	95	96	80-120	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD
Chromium	mg/L (ppm)	5	93	93	80-120	0
Copper	mg/L (ppm)	5	95	96	80-120	1
Nickel	mg/L (ppm)	10	95	94	80-120	1
Zinc	mg/L (ppm)	5	96	96	80-120	0

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

AKC-0011033

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 2, 1998

DUPLICATE COPY

INVOICE #98ACU0402-2

Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

**RE: Project Metro Self-monitor, PO# M10464: Results of testing requested
by Gerry Thompson for material submitted on March 24, 1998.**

1 water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$65 per sample

\$ 65.00

Amount Due

\$ 65.00

FEDERAL TAX ID (b) (6)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 2, 1998

**Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134**


Dear Mr. Thompson:

Included are the results from the testing of material submitted on March 24, 1998 from your Metro Self-monitor, PO# M10464 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



**Manuel Marti
Project Manager**

**Enclosures
ACU0402R.DOC**